

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service
Alcohol, Drug Abuse, and Mental Health Administration
National Institute on Alcohol Abuse and Alcoholism

PROGRAM ANNOUNCEMENT
February 1990

RESEARCH ON WORKSITE-RELATED ALCOHOL PROBLEMS:
CAUSATIVE PROCESSES, PRIMARY AND SECONDARY PREVENTION

(Catalog of Federal Domestic Assistance No. 13.273)

I. INTRODUCTION AND BACKGROUND INFORMATION

Alcohol abuse and its associated morbidity and mortality pose a major problem for American business and industry, significantly threatening worker health and corporate profits [1]. The most recent statistics from the Department of Labor reveal a seasonally adjusted U.S. workforce of 124,105,000 people as of October 1989 [2]. If abuse of alcohol is as prevalent among working adults as it is among the population at large (a not-unreasonable assumption [3,4]), then millions of workers are using alcohol excessively and having attendant problems. Such abusive drinking can result in traffic deaths, termination of employment, and/or adverse health consequences, not to mention increased absenteeism, injuries on the job, and declining production that occurs prior to job loss [1]. Costs related to alcohol misuse on and off the job are consequently significant health-related economic issues [5].

Over the past two decades, any number of worksite innovations have been developed to improve the health and productivity of employees [6,7] (e.g., employee assistance programs (EAPs), quality of worklife programs, health promotion, alcohol (drug) testing and screening programs). Theoretically at least, these efforts also address the reduction of worksite-related alcohol problems [7]. All claim to have a positive impact, either directly or indirectly [7]. However, concurrent research has not kept pace by providing the outcome evaluations to substantiate or disprove those claims. There is an obvious need for carefully conceived scientifically grounded research that addresses the issue of prevention outcomes.

The worksite research that has been conducted has concentrated primarily on the identification, referral and treatment of alcohol problems [8]. Relatively few studies have examined how the workplace may contribute to the development of alcohol-related problems among workers, both on and off the job. And there has been a paucity of scientifically respectable studies assessing the effectiveness of preventive interventions.

Thus, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) wishes to encourage research on (1) the social and psychological processes involved in the onset and perpetuation of worksite-related alcohol problems, and (2) the development and testing of preventive strategies to reduce the incidence and prevalence of these problems.

The statutory authorities for anticipated awards are sections 301 and 510 of the Public Health Service Act (42 USC 241 and 290bb).

II. AREAS OF RESEARCH INTEREST

A. Causative Factors

Both policy makers and researchers have speculated about the causes of alcohol problems that impact the workplace [9]. Some contend that the worksite itself may contribute to the development of drinking problems [10], while others believe that the employees bring these difficulties into the workplace [11-13]. Regardless of the origin of alcohol-related problems, the worksite may be an important intervening institution that can significantly affect their incidence and prevalence.

NIAAA is interested in studies that would contribute to understanding how work institutions help create, exacerbate, or ameliorate alcohol-related problems and their sequelae. These studies should focus upon the work environment, the workers themselves, and relationships between milieus and persons that may increase or decrease the incidence, duration, and severity of worksite-linked alcohol abuse.

Reviews of relevant research have identified five possible groupings of "causal" factors with regard to the development of alcohol problems at the worksite [14]. These clusters may operate separately or synergistically with one or more of the others. Although they tend to be problem-oriented conceptual categories, each of them may operate as a protective process as well. If, for example, alienation leads to alcohol abuse, the converse of alienation (work attachment) may protect the employee from drinking problems. Moreover, alienation from a subculture that encourages alcohol abuse may insulate or separate the employee from that abuse.

Workplace Cultures. The workplace culture or subculture can promote definitions of acceptable drinking or nondrinking behaviors for employees in a particular work setting, either on or off the job [14]. Drinking examples include sherry parties for university faculty, heavy drinking business lunches, and "topping out" parties in the construction industry. Established non-drinking behaviors for employees include, for example, total abstinence for commercial pilots 12 hours before flight time.

The norms may be dictated by the formal administrative hierarchy or informal occupational subcultures in the work organization [14].

Drinking norms can vary among organizations and from one suborganizational component to another [14]. Studies suggest that workers in different occupations may exhibit dissimilar drinking behaviors [14]. Drinking patterns and problems acceptable to one work environment or occupational group might be totally unacceptable elsewhere [14]. A potential confounding factor, of course, is selective recruiting. Workers prone to drinking problems may seek out occupations where heavy drinking practices are tolerated or even respected [14]. And, conversely, abstainers and moderate drinkers may choose work cultures that are compatible with their particular sets of values, shifting jobs if necessary to avoid unacceptable social pressures.

Social Control. Social control in this context refers to the degree of freedom to behave independent of co-worker or managerial observation and supervision [15]. It may, therefore, be an index of opportunities to drink excessively or to limit alcohol consumption in accord with personal preferences. Certain organizational or institutional characteristics may operate to weaken an employee's visibility and regulation by the organization, thereby permitting opportunities to drink outside the range of social control [15]. These characteristics translate into work roles [14] with (1) geographic mobility, shift changes, and frequent changes among fellow workers and formal supervisors (e.g., the military and the entertainment industry); (2) little or no supervision (e.g., high level executives, railroad workers); (3) low visibility of performance (e.g., utilities installation teams); and (4) little or no interdependency with other roles (e.g., painters).

In contrast, deviant or excessive drinking (if it occurs in the first place) is more likely to be identified and appropriately addressed in a closely supervised interdependent work environment [15]. Thus, social control may operate to prevent alcohol abuse by assuming that the group norms are opposed

workers may seek relief from their sense of powerlessness through drinking [16,17].

Occupational Stress. Work overload, monotony, job complexity, role conflict, and the physical conditions of the work environment are several possible stress factors associated with employment [14]. Each stressor may serve as an irritant to a particular employee but may not, alone, be enough to be felt overtly as stress in that worker [18]. The effects might be cumulative, or these types of strains may act more indirectly to exacerbate or intensify pre-existing emotional conditions, eventually culminating in problematic drinking [14]. Frequency of work-related feelings of tension and worry about job circumstances, for example, have both been reported to be positively correlated (to some degree at least) with alcohol-related job problems and dependency on alcohol [14].

Social and Physical Availability of Alcohol. Social availability is the degree to which alcohol is available within formal and informal work-related social entities and the manner in which the use of alcohol by such groups affects member consumption patterns (e.g., during lunch breaks, after work, etc.) [19]. Physical availability is the simple accessibility of alcoholic beverages to workers in the actual work environment and in areas surrounding the worksite (e.g., density of bars and sales outlets) [19]. While social availability might be subsumed under other "causal" clusters, such as workplace culture and social control, the impact of physical availability could more easily be demonstrated to be a separate factor which, of course, would operate in conjunction with various social forces.

These five clusters of "causal" factors offer a variety of research options and may be used to guide investigators in studying (1) social and psychological contributors to work-related alcohol problems, and (2) the prevention or control of such problems through protective mechanisms. The various elements or clusters may be investigated singly or in combination.

Outcome measures (or endpoints) would certainly include the degree or extent of problem drinking. However, the causal process (that leads to deleterious or healthy outcomes) must be a central research focus. This might involve an examination of group norms and expectations, group pressures, selection mechanisms, and/or social inclusion and ostracism. The relevance of certain psychological concepts and principles, such as internal vs. external locus of control or social learning theory, may also be worthy of exploration. Another provocative question concerns the impact of work-linked cultural and ethnic differences on consumption patterns and problem behavior. Investigators are encouraged to distinguish between the influences of worksite, ethnic, and socioeconomic cultures.

B. Secondary Prevention of Alcohol Problems

Until recently, the major thrust of worksite programs has been secondary prevention (i.e., early intervention to prevent the progression of a problem) [13]. Over the last 10 to 15 years, however, the direction has changed in many organizations to strategies intended to prevent the occurrence of a problem in the first place, i.e., primary prevention [20].

The occupational programs directly or indirectly targeted toward the prevention and reduction of alcohol-related problems of employees have essentially been oriented toward changing the individual worker, rather than the work environment [21]. These programs, which have both direct and indirect economic and health implications, have focused on employee assistance programs, alcohol screening and testing programs, health promotion, and quality of worklife [6,7]. While based on different ideologies, each claims to contribute to both the overall well-being of the workforce and the financial health of the company [7]. There has, however, been little research to substantiate such claims or to compare the relative effectiveness of the various programs in terms of improved worker health or productivity.

Since this section of the announcement is concerned with secondary prevention strategies, it focuses only on employee assistance programs and screening and testing. Health promotion and quality of worklife will be discussed in the following section on primary prevention. The order of discussion reflects the historic emphasis on EAPs and the relative neglect of primary prevention research.

Employee Assistance Programs. Though they have historically focused on alcohol abuse, traditional employee assistance programs (EAPs) offer identification and assessment of a wide array of employee problems, as well as referral and followup services [8,22]. Thus, they can be considered instruments of "secondary" prevention. Concerns about potential disruptions of employee work performance are the major rationale for the existence and utilization of EAPs [13]. Supervisors are trained to use "constructive confrontation" with an employee, citing evidence of impaired performance, absenteeism, or behavior problems, and concurrently offering the employee assistance in resolving the problem [13,22]. EAP referrals, however, may also be made by co-workers, trade unions, or by the employees themselves [13].

A limited number of studies have evaluated the effectiveness of constructive intervention and counseling among alcohol-impaired employees [15,23-25]. Generally speaking, these studies suggest a positive impact of such strategies on work performance as measured by supervisory attitudes and perceptions, absenteeism, disciplinary actions, unintentional injuries, and

turnover rates [4,13,25,26]. However, this type of research has been hindered by poor record keeping, possible biases in perceptions and recollections, and "soft" (not rigorous) research designs [25,27].

Evaluations of the economic efficiency of traditional EAPs have presumably been based on measures of direct financial savings resulting from reductions in: injuries, sick leave, sickness disability and health insurance claims, and turnover and retraining costs [13,27-29]. Savings have been reported in a number of the studies, particularly a recent financial offset evaluation [30] which included comparisons based on relevant attributes of employees (such as age, sex, education, and job responsibilities). Some investigators, however, have used estimated averages in key areas of cost savings rather than hard data, and cost comparisons with nonproblem or untreated workers may not have been provided [28]. In other studies, the findings have been ambiguous [27,28].

For a number of the EAP effectiveness studies, a variety of methodological problems have been identified [4,27,28]. These weaknesses include lack of control groups, reliance on subjects' self reports, lack of independent measures of consumption, short-term follow-up assessments, and failure to separate the effects of the treatment regimens to which employees are referred from those of the EAP itself. Other difficulties concern questions of program equivalency (e.g., complexity and scope of the EAP) that can obviously affect generalization of study results [4,8,27,28]. Moreover, there appears to be a lack of standards for assessing dimensions of the alcohol problem [4]. A related issue is the possibility that much of the evaluation efforts, to date, have been self-serving [1,8]. Established programs may need to justify their existence in order to survive, and supporters of the EAP ideology may find it impossible to be truly objective [8]. On the other hand, a central problem for researchers has been gaining access to company records and the managerial/union support necessary for designing and conducting controlled studies.

Testing and Screening Programs. Due to concern about alcohol- and drug-related problems associated with the work situation (especially highly publicized events such as transportation accidents and oil spills), an increasing number of private and public institutions are considering or implementing testing and screening programs [6]. One study along this line suggests the utility of screening and testing to reduce drug abuse among military personnel [6,31]. There do not appear to have been assessments of the impact of screening and testing on business costs, worker morale, turnover, or productivity; further studies of effectiveness are in order, from the standpoint of the prevention of alcohol abuse and its early identification.

NIAAA is especially interested in research that measures the effectiveness of secondary prevention programs in reducing worksite-related alcohol problems. Ideally, such research will employ experimental or quasi-experimental designs. Relevant topics might include the relative effectiveness of the various types of programs (e.g., internal vs. external EAPs, union-provided vs. industry-provided programs) in terms of the reduction of alcohol-related problems and the enhancement of productivity. Specific subgroups of workers might be of special interest (e.g., women, ethnic minorities, administrative personnel vs. lower-echelon workers). Other factors which might be examined are: contextual variables such as organizational structure (e.g., large vs. small businesses), market forces (e.g., whether the organization is competitively successful), presence or absence of a labor union, regulatory climate, the corporate philosophy and motives behind the program (e.g., to enhance labor relations rather than specific concern for workers' health or productivity), the presence or absence of community support, nature and extent of program diffusion, cost containment practices, and integration with existing community services.

C. Primary Prevention

The major contribution of the worksite to the reduction of alcohol problems may still be forthcoming: preventing the occurrence of alcohol problems in the first place (i.e., primary prevention). While it may be easier to prevent a problem if its etiology is understood, primary prevention programs can be effectively implemented without a full understanding of the causes of alcohol abuse. Such programs may be oriented toward general health promotion and worklife quality; or alternatively, they may focus specifically on the prevention of alcohol problems, through policy deterrents, educational strategies, and/or broader community involvement. Another business-based approach may be provided by the hospitality industry itself.

such programs in business and industry, and their comprehensiveness [39-41]; and guidance has been suggested for assessing the effectiveness of these programs [42,43]. Yet, there is a dearth of published research evaluating their impact on changes in health-status indices, personal health behaviors, and cost/benefit ratios -- in general terms or specifically related to the prevention of alcohol problems [7].

Of particular research interest is the relative impact of these programs in reducing alcohol-related worksite problems. Since health promotion programs are subject to voluntary participation, additional research questions could include: the extent to which selective processes attract or screen out persons most at risk for alcohol problems; whether there is a "spill-over" effect to persons not choosing to enroll in the programs; and the extent to which the ideology of health promotion influences off-work behavior with specific reference to the misuse of alcohol.

The second general health/well-being type of program is quality of worklife (QWL). This strategy, which is an offshoot of the organizational development movement, stems from human relations ideology [7]. Like health promotion, it includes a variety of activities but places an emphasis on the need for cooperation by all participants [7]. These activities are intended to enhance or improve working conditions, job satisfaction, and the self esteem of workers. To achieve these objectives, a number of QWL approaches have been introduced: quality circles, job enrichment, labor-management committees, opinion surveys, open door policies, flexible schedules, and semi-autonomous work teams [7].

The same fundamental question concerning program effectiveness that applies to the health promotion format also applies to quality of worklife approaches. And as is true for health promotion, the specific impact of QWL strategies on alcohol abuse has not yet been assessed. It would be particularly important to understand how the basic precepts inherent in QWL ideology (cooperation, teamwork, and personal responsibility) could translate into the reduction or absence of alcohol-related problems.

2. Alcohol-Specific Strategies

Policy Deterrents. Businesses communicate expectations regarding employee behavior through their formal and informal policies and regulations. Establishing policies regarding the use or misuse of alcohol (e.g., reimbursing drinking costs through expense accounts) may also communicate messages about acceptable behavior beyond the workplace. Investigative journalists are suggesting that American industry is undergoing a shift in the "cultural position" of alcohol. This is expressed

in restrictive norms regarding use of alcohol during lunch time [44], concern about reinstatement of employment rights to known alcoholics [45,46], and curtailment of alcohol use during company functions [47,48].

Research in this area might focus upon the following kinds of critical questions:

- (1) Has there in fact been a change in concern about alcohol problems on and off the job? Hard data might include formal statements of policy over time, and retrospective perceptions of CEOs, union officials, and "old timers."
- (2) To what extent do employees and their supervisors actually comply with these policies?
- (3) What, if any, mechanisms are used to circumvent them?
- (4) What impact do such policies have on drinking practices and alcohol-related problems?

There are also indications that companies are becoming increasingly concerned about alcohol problems that occur off the job, such as drunk driving. Indeed, some employers have already implemented policies and regulations regarding alcohol (and drug) use "off the job." Professional football players, for example, are subject to disciplinary measures for alcohol and other drug abuse, regardless of their competency on the field. The same is true for the military which regards alcohol-related incidents to be unbecoming conduct, whether or not the individual is wearing a uniform at the time. This is particularly true for officers.

Education. A second business-based strategy in need of evaluation is the preventive effect of alcohol education that may be required of all employees. Preventive curricula provided to youth through the schools, however, have not met with much success [49,50]. An interesting research question, thus, might be directed toward a comparison of standard employee alcohol abuse education versus an expanded curriculum that goes beyond education in the formal sense. For example, an investigator could develop and test the effectiveness of a curriculum that teaches peer resistance skills within the worksite milieu. An expanded educational intervention might also encourage employees to adopt parental role modeling behaviors that show an awareness of the hazards of alcohol abuse, such as drinking and driving. It may well be that an educational program for employees that focuses on their children would prove to be more salient than one that targets the employees themselves. In addition, education programs for spouses and families of employees (e.g., those offered to dependents by the Department of Navy) might also be tested in terms of their effectiveness.

It remains to be determined how prevention programs for employees might best be implemented, whether attendance should be required or voluntary, who should implement them (management? unions? EAPs?), whether there should be booster sessions, and what outcome measures would be most appropriate -- preferably changes in behavior.

Community Collaboration. Another avenue of inquiry would be the design and testing of prevention strategies that capitalize on the place of business within the fabric of a community. Prior research has shown that community leaders and residents rank the support of business organizations far higher than support from other groups in the initiation of programs promoting community health [51]. Little research, however, has been conducted on preventing alcohol problems at the community level, and fewer studies have evaluated the possible synergistic impact of cooperative interventions between the community at large and particular businesses or industries.

One study, implemented in Kansas City, Missouri, found that high-level support from a local business, recognized for its civic involvement, greatly enhanced the participation of community groups in the implementation of a community-based prevention effort [51]. The results of this research demonstrated that collaboration of diverse interests (which in this case included a locally based pharmaceutical company and a major league baseball team) may potentially be an effective approach to prevention programming. An important avenue of investigation concerns whether the use of such a strategy could reduce the incidence and prevalence of both worksite-related alcohol problems and, at the same time, those that occur within the community at large.

In a similar vein, researchers might assess the potential impact of the use of a company's political and financial influence to change public policy: for example, encouraging reduction of alcohol outlets in areas surrounding the business, or in the community generally. Investigators could, alternatively, examine the costs and benefits to industry of corporate involvement in community programs, assessing such factors as direct expenditures, changes in company image, and increased sales and revenues from greater visibility in the community marketplace.

Server Intervention. A fourth avenue of inquiry might be directed toward the hospitality industry itself. In this case, the ultimate target of intervention would be patrons of the industry rather than its employees. However, the employees can play critical work roles in exacerbating alcohol-related problems or helping to prevent them. Approximately half of those arrested for driving while intoxicated come from a place licensed to sell alcoholic beverages [52]. Some prevention strategists have turned their attention to the possibility of reducing the risk of alcohol-impaired driving through modification of the drinking environment [52].

So-called server intervention programs attempt to create a safer drinking environment to reduce the risk of intoxication and prevent intoxicated persons from harming themselves and others [52]. These various efforts include specialized training for servers to monitor patron alcohol intake, raising the prices of alcoholic beverages, promoting food, and altering decor [52]. Such programs have expanded to become comprehensive in scope, and now include review and modification of management policies and operations, in addition to employee training [52]. Reflecting this evolution, the concept of "responsible beverage service" has replaced the earlier server intervention programs [52].

The hospitality industry has an immediate stake in attending to alcohol problems, as witnessed by recent litigation on liability issues [6]. The most effective role of the service industry as a catalyst for or participant in prevention programs is still undetermined. A number of options are available: responsible beverage service, designated driver and alternative transportation programs, sponsorship of anti-drunk driving publicity campaigns, and support of national and local organizations such as Mothers Against Drunk Driving. NIAAA encourages studies of the impact and cost effectiveness of these types of prevention activities by local and national alcohol service industries. Researchers may also wish to investigate how these particular businesses balance their profit-making motives and their community responsibilities with respect to alcohol abuse prevention.

III. METHODOLOGICAL CONSIDERATIONS

Research in the areas discussed above may employ any of the standard research methodologies and may be descriptive, exploratory, or directed to the determination of causal relations. For example, a study of worksite culture might best be done by field observation techniques, while a study of work-induced anomie might involve a questionnaire procedure. If the study includes an intervention, then an experimental or quasi-experimental design is appropriate. Investigators may employ multiple or single research methodologies of any scientific discipline that can contribute to this area of prevention research.

NIAAA expects that worksite research will be conceived and executed so as to satisfy strong criteria of scientific merit. Unless applicants have the methodological and technical skills requisite to the design and analysis of the proposed research, NIAAA strongly urges them to consult with statisticians or other methodologists. They may wish to include a consultant in the proposal itself for help in the design, analysis and interpretation stages of the project.

Measurement Issues. Since all empirical research depends upon a reliable descriptive base, the conceptualization and procedures of observation of key variables and attributes must satisfy conventional criteria of validity and reliability. Alcohol consumption, for example, is conveniently measured by self reports of subjects, but the procedure is likely to produce biased and unreliable results and may have to be augmented by corroborative information. Blood Alcohol Concentration (BAC) data provide a more objective and reliable measure of consumption. Direct measures are generally preferable to indirect, but if the latter are employed, the causal or associational linkage between the surrogate measure and the target variable should be explicated and rationalized.

Design Issues. Research to establish the efficacy of an intervention must include appropriate comparison groups. Many studies of interventions have been found to lack even basic control groups, thus making any assessment of effect indeterminate. The single most powerful procedure available to provide appropriate comparison groups is the random assignment of interventions to experimental subjects. Proposals that do not include random assignment of interventions may be acceptable, depending upon the cogency of the considerations that led to the omission and upon the scientific value of the conclusions supportable by the proposed alternative procedure. For example, quasi-experimental designs are employed as practical alternatives to randomized designs, but they are not as effective in controlling for confounding factors as are the latter. Their use in the proposed research requires an explicit defense that

includes an appraisal of the potential for generalization of the results possible.

The proposed research may employ cross-sectional or longitudinal designs, whichever is appropriate to the study, but the use of the former as a surrogate for the latter is always problematic and risks confusing cohort or historical trends with developmental changes. Longitudinal studies are often costly, difficult to protect in the field, and entail extensive, long term commitment on the part of the investigator and the sponsoring agency. Nevertheless, they are the most appropriate structure for the investigation of processes that develop over time. NIAAA encourages proposals employing such designs.

A critical area in ex post facto explanatory research is the positing and establishment of a specific causal order. If there is available a theory sufficiently developed to specify the causal order, the objective of the research would be to find empirical support for the theory. The theory itself has to be interesting and valuable enough to justify the research effort. If the literature does not provide sufficient grounds for specifying a causal structure, exploratory research may be undertaken to suggest causal relationships. Any particular research project may involve both activities.

Sampling Issues. Random selection at some stage in drawing a sample is a procedure necessary to justify generalization of findings according to principles of statistical inference. However, accomplishing the procedure is often very difficult in research on human subjects. Among the more common events that compromise the representativeness of a sample are self selection and sample attrition. These events make the substantive conclusion unevaluatable on purely statistical grounds. Another circumstance that vitiates statistical inference is the selection of subjects on the basis of convenience rather than by a random process. The researcher must avoid these problems or find ways to control them. The generality of findings may be based on non-statistical grounds than statistical ones by a sample is typical in some important respects. Findings are consistent with other related findings. It is upon the researcher to provide and

IV. ELIGIBILITY

Applications may be submitted by public or private non-profit or for-profit organizations such as universities, colleges, hospitals, research institutes and organizations, units of State and local governments, and eligible agencies of the Federal Government. Women and minority investigators are encouraged to apply.

V. INCLUSION OF MINORITIES IN STUDY POPULATIONS

NIAAA urges applicants to give added attention (where feasible and appropriate) to the inclusion of minorities in study populations for research into the etiology of diseases, research in behavioral and social sciences, clinical studies of treatment and treatment outcomes, research on the dynamics of health care and its impact on disease, and appropriate interventions for disease prevention and health promotion. If minorities are not included in a given study, a clear rationale for their exclusion should be provided.

VI. INCLUSION OF WOMEN IN STUDY POPULATIONS

NIAAA urges applicants to consider the inclusion of women in the study populations for all clinical research efforts. Exceptions would be studies of diseases which exclusively affect males or where involvement of pregnant women may expose the fetus to undue risks. Gender differences should be noted and evaluated. If women are not to be included, a clear rationale should be provided for their exclusion. In order to provide more precise information to the treatment community, it is recommended that publications resulting from NIAAA-supported research in which the study population was limited to one sex for any reason other than the disease or condition studied exclusively affects that sex, should state, in the abstract summary, the gender of the population studied, e.g., "male patients," "male volunteers," "female patients," "female volunteers."

VII. APPLICATION PROCEDURES

Applicants should use the standard research grant application form PHS 398 (revised 10/88). The name of this announcement, "Research on Worksite-Related Alcohol Problems: Causative Factors, Primary and Secondary Prevention," should be typed on page 1, item 2, of the PHS 398 application form.

Application kits containing the necessary forms and instructions (PHS 398) may be obtained from institutional business offices or offices of sponsored research at most universities, colleges, medical schools, and other major research facilities. Application forms may also be obtained from the

National Clearinghouse for Alcohol and Drug Information,
Reference Department, P.O. Box 2345, Rockville, Maryland 20852
(telephone: 301/468-2600).

The signed original and six permanent, legible copies of the completed application should be submitted to:

Division of Research Grants, NIH
Westwood Building, Room 240
5333 Westbard Avenue
Bethesda, Maryland 20892*

* Applicants who use express mail or a courier service should use the following zip code: 20816.

VIII. CONSULTATION AND FURTHER INFORMATION

In addition to NIAAA, the National Institute on Drug Abuse (NIDA) is interested in research which addresses problems relevant to worksite-related drug abuse prevention and intervention. Applications which address both alcohol and other drug problems may be funded jointly by NIAAA and NIDA or by either Institute, depending on whether alcohol or other drugs are emphasized. Applications are considered for acceptance and assigned according to standing Institute referral guidelines.

Potential applicants are encouraged to seek preapplication consultation. For information on preparing an application under this announcement, please contact:

Donald F. Godwin
Prevention Research Branch
Division of Clinical and Prevention Research
National Institute on Alcohol Abuse and Alcoholism
5600 Fishers Lane, Room 16C-03
Rockville, Maryland 20857
Telephone: (301) 443-1677.

IX. REVIEW PROCEDURES

The Division of Research Grants, NIH, serves as a central point for receipt of applications under this announcement. Applications received will be assigned to an Initial Review Group (IRG) in accordance with established Public Health Service Referral Guidelines. The IRG, consisting primarily of non-Federal scientific and technical experts, will review the application for scientific and technical merit. Notification of the review recommendations will be sent to the applicant after the initial review. Applications will receive a second-level review by the appropriate National Advisory Council, whose review may be based on policy as well as scientific merit.

considerations. Only applications recommended for approval by Council may be considered for funding.

Applications submitted in response to this announcement are not subject to the intergovernmental review requirements of Executive Order 12372, as implemented through Department of Health and Human Service regulations at 45 CFR Part 100 and are not subject to Health Systems Agency review.

X. APPLICATION RECEIPT AND REVIEW SCHEDULE

Applications submitted for this announcement will be accepted and reviewed in accordance with the regular PHS research grant application review schedule which is as follows:

<u>Receipt Dates</u> <u>New/Renewal</u>	<u>Initial</u> <u>Review</u>	<u>Advisory</u> <u>Council Review</u>	<u>Earliest</u> <u>Start Date</u>
June 1/July 1*	October	Jan./Feb.	April 1
Oct. 1/Nov. 1*	February	May/June	July 1
Feb. 1/March 1*	June	Sept./Oct.	December 1

* Amended applications (new and renewal) are to be submitted on these dates.

Applications received after the specified receipt dates will be returned or held for the next review cycle.

XI. REVIEW CRITERIA

Criteria to be used in the scientific and technical review of grant applications responding to this program announcement include the following:

1. Significance of the research focus for the prevention of alcohol-related problems associated with the work environment;
2. Potential of the research to contribute to knowledge of the primary and secondary prevention of worksite-related alcohol problems;

Evidence that the investigators are familiar with the state-of-the-art and existing knowledge gaps in their proposed area of research;

Degree of scientific rigor in the design and implementation of the study;

Adequacy of the methods used to collect and analyze data;

6. Qualifications and research experience of the principal investigator and other key research personnel;
7. Evidence of availability of facilities, resources, collaborative arrangements, and subjects appropriate to the goals of the research;
8. Adequacy of procedures to protect human subjects;
9. Appropriateness of budget estimates for the proposed research activities.

XII. TERMS AND CONDITIONS OF SUPPORT

Grant funds may be used for expenses clearly related and necessary to carry out research projects, including both direct costs which can be specifically identified with the project and allowable indirect costs of the institution. Research grant support may not be used to establish, add a component to, or operate a prevention, rehabilitation, or treatment service program. Support for research-related prevention, rehabilitation, or treatment services and programs may be requested only for costs required by the research. These costs must be justified in terms of research objectives, methods, and designs which promise to yield generalizable knowledge and/or make a significant contribution to theoretical concepts.

Grants must be administered in accordance with the PHS Grants Policy Statement (Rev. January 1, 1987), which is available for \$4.50 from the Superintendent of Documents, U.S. Government Printing Office (GPO), Washington, D.C. 20402. When ordering copies, the GPO stock number, GPO 017-020-00092-7, should be referenced.

Federal regulations at Title 42 (CFR) Part 52, "Grants for Research Projects," and Title 45 CFR Part 74 and 92, "Administration of Grants," are applicable to these awards.

XIII. AWARD CRITERIA AND AVAILABILITY OF FUNDS

Applications recommended for approval by the appropriate Advisory Council will be considered for funding on the basis of overall scientific and technical merit of the proposal as determined by peer review, NIAAA program needs and balance. In Fiscal Year 1991, it is estimated that approximately \$600,000 will be available to support three or four new grants under this announcement. The amount of funding available will depend on appropriated funds and program priorities at the time of award.

XIV. PERIOD OF SUPPORT

Applicants may request up to 5 years of support (renewable

for subsequent periods). Annual awards will be made subject to availability of funds and progress achieved. A competing continuation (i.e., renewal) application may be submitted before the end of an approved period of support to continue a project.

XV. OTHER RESEARCH-RELATED PROGRAMS SPONSORED BY NIAAA

NIAAA has other research and related programs which are described in separate announcements that may be obtained by writing to the National Clearinghouse for Alcohol and Drug Information (NCADI), P.O. Box 2345, Rockville, Maryland 20852. Other announcements that may relate to primary or secondary prevention include:

Research on the Prevention of Alcohol Abuse Among Children, Adolescents, and Young Adults (October 1988, NIAAA);

Alcoholism Treatment: Matching Clients to Treatments (Revised April 1989, NIAAA);

Research on Economic and Socioeconomic Issues in the Prevention, Treatment, and Epidemiology of Alcohol Abuse and Alcoholism (December 1988, NIAAA); and

Research on Behavior Change and Prevention Strategies to Reduce Transmission of Human Immunodeficiency Virus (HIV) (September 1988, NIMH/NIDA/NIAAA/NIH).

References

1. Alcohol and drugs in the workplace: costs, controls, and controversies. A BNA special report. Washington DC: Bureau of National Affairs, Inc., 1986:7-9.
2. The employment situation. US Department of Labor, Bureau of Labor Statistics, Office of Employment and Unemployment Statistics, Division of Occupational and Administrative Statistics. Washington DC, USDL89-528, October, 1989.
3. Wrich JT. The impact of substance abuse at the workplace. In: Axel H, ed. Corporate strategies for controlling substance abuse: report no. 883. New York: The Conference Board, 1986, 11-18.
4. Sixth Special Report to the US Congress on Alcohol and Health. Rockville MD: National Institute on Alcohol Abuse and Alcoholism, 1987; DHHS publication no. (ADM)87-1519.
5. Fifth Special Report to the US Congress on Alcohol and Health. Rockville MD: National Institute on Alcohol Abuse and Alcoholism, 1984; DHHS publication no. (ADM)84-1291, 93-96.
6. Axel H. Drugs of abuse: public attitudes, politics and business. In: Axel H, ed. Corporate strategies for controlling substance abuse: report no. 883. New York: The Conference Board, 1986, 3-10.

10. Pearlin LI. The stress process. J Health Social Behavior 1981;22:337-356.
11. Conrad P, Schneider J. Deviance and medicalization: from badness to sickness. Lexington MA: D.C. Heath, 1980.
12. Roman PM. Medicalization and social control in the workplace: prospects for the 1980's. J Appl Behav Sci 1980;16:407-422.
13. Sonnenstuhl WJ, Trice HM. Strategies for employee assistance programs: the crucial balance. Ithaca NY: ILR Press, 1986.
14. Trice HM, Sonnenstuhl WJ. Drinking behavior and risk factors related to the workplace: implications for research and prevention. J Appl Behav Sci 1988;24:327-346.
15. Trice HM, Roman PM. Spirits and demons at work: alcohol and other drugs on the job, 2nd edition. Ithaca NY: ILR Press, 1978.
16. Seeman M, Anderson CS. Alienation and alcohol: the role of work, mastery, and community in drinking behavior. Am Sociological Rev 1983;48:60-77.
17. McClelland DC, Davis WN, Kalin R, Wanner E. The drinking man. New York: Free Press, 1972.
18. Price RH. Research on mental health problems in the worksite: a state of the art review. In: Godwin DF, Lieberman ML, Leukefeld CG, eds. The business of doing worksite research. Rockville MD: National Institute on Alcohol Abuse and Alcoholism, National Institute on Drug Abuse, and National Institute of Mental Health, July 1985; Contract no. ADM-281-84-0002, 40-50.
19. Parker DA, Brody JA. Risk factors for alcoholism and alcohol problems among employed women and men. Occupational alcoholism: a review of research issues. Research monograph 8. Rockville MD: National Institute on Alcohol Abuse and Alcoholism, 1982; DHHS publication no. (ADM)82-1184, 99-127.
20. Cohen WS. Health promotion in the workplace: a prescription for good health. Am Psychologist 1985;40:213-216.
21. Conrad P. Wellness in the workplace: potentials and pitfalls of worksite health promotion. The Millbank Q 1987;65:255-275.

22. Roman PM, Blum TC. The core technology of employee assistance programs: a reaffirmation. *The ALMACAN* 1988;18:17-22.
23. Trice HM. Alcoholism in industry: modern procedures. New York: The Christopher D. Smithers Foundation. 1962.
24. Paredes A. Denial, deceptive maneuvers, and consistency in the behavior of alcoholics. *Annals of the New York Academy of Science* 1974;233:23-33.
25. Trice HM, Beyer JM. Work related outcomes of the constructive-confrontation strategy in a job-based alcoholism program. *J Stud Alcohol* 1984;45:393-404.
26. Foote A, Erfurt JC. Effectiveness of comprehensive employee assistance programs at reaching alcoholics. *J Drug Issues* 1981;11:217-232.
27. Kurtz NR, Googins B, Howard WC. Measuring the success of occupational alcoholism programs. *J Stud Alcohol* 1984;45:33-45.
28. Schramm CJ. Evaluating occupational programs: efficiency and effectiveness. In: *Occupational alcoholism: a review of research issues. Research monograph 8.* Rockville MD: National Institute on Alcohol Abuse and Alcoholism, 1982; DHHS publication no. (ADM)82-1184, 363-371.
29. An American crisis: drugs in the workplace. *J Am Insurance* 1987;63:9-11.
30. Smith DC, Mahoney JJ. McDonnell Douglas Corporation: employee assistance program financial offset study 1985-1988. In: *18th EAPA Annual* Oct. 29-Nov. 1, 1989: research 11-20.
31. Bray RM, Marsden ME, Guess LL, Wheelless SC, Iannacchione VG, Keesling SR. 1988 worldwide survey of substance abuse and health behaviors among military personnel: executive summary. Research Triangle NC: Research Triangle Institute, 1988.
32. Roman PM, Blum TC, Bennett N. Educating organizational consumers about employee assistance programs. *Public Personnel Management* 1987;16:299-312.
33. Blum TC, Roman PM. Employee assistance programs and human resources management. In: *Research in personnel and human resources management, vol. 7.* Greenwich CT: JAI Press, 1989 (forthcoming).

34. Price JH, Marcotte B. Status of health promotion programs at the worksite - a review. Health Ed 1983;14:4-9.
35. Chovil AC, Alterkruse EB. Health promotion in occupational medicine and the primary care physician. Family Community Health 1986;8:29-35.
36. Berry CA. Approach to good health for employees and reduced health care costs for industry. Washington DC: Health Insurance Association of America, 1981.
37. Schweiker RS. Closing address: promotion/prevention: programs, policies, and prospects. In: Proceedings: alcohol, drug abuse, and mental health promotion/prevention. Rockville MD: Alcohol, Drug Abuse, and Mental Health Administration, 1981.
38. Cohen WS. Health promotion in the workplace: a prescription for good health. Am Psychologist 1985;40:213-216.
39. Twelfth annual social report of the life and health insurance business. Washington DC: Center for Corporate Public Involvement, 1984.
40. Davis MF, Rosenberg K, Iverson DC, Vernon TM, Bauer J. Worksite health promotion in Colorado. Public Health Rep 1984;99:538-543.
41. Rich C. Employee assistance programs: prescription for stress in the press. Employee Assistance Q 1987;3:25-34.
42. Iverson DC. Programs, pragmatism and politics: practical strategies for evaluation. In: Conference proceedings: employee assistance programs. Minneapolis MN, 5-8 August 1981, 97-115.
43. Mullen P, Iverson DC. Evaluation of health education-risk reduction programs. In: Conference proceedings: report of the health education-risk reduction conference. Anaheim CA, 27-30 October 1981, 93-102.
44. Browning G. Drinking's out for the lunch bunch. The Washington Post 1989 May 31:F1 & F4.
45. Bennett A, Soloman J, Sullivan A. Firms debate hard line on alcoholics. The Wall Street Journal 1989 April 13:B1 (Marketplace).
46. Donkle R. High on the job. The Washington Post 1989 October 31:12-14 (Health).

47. Lynn M. Who can help drunks? Their bosses can start. USA Today 1987 December 30:10A(col 5&6).
48. Ames G. Corporate culture. Business and Health 1987;5:45.
49. Bruvold WH, Rundall TG. A meta-analysis and theoretical review of school based tobacco and alcohol intervention programs. Psychol Health 1988;2:53-78.
50. Moskowitz JM. The primary prevention of alcohol problems: a critical review of the research literature. J Stud Alcohol 1989;50:54-58.
51. Pentz MA, Cormack C, Flay B, Hansen WB, Johnson CA. Balancing program and research integrity in community drug abuse prevention: project STAR approach. J School Health 1986;56:389-393.
52. Saltz RT. Server intervention and responsible beverage service programs. In: Surgeon General's workshop on drunk driving: background papers. Rockville MD: Office of the Surgeon General, 1989:169-179.